Supporting Materials

La-doped Biomimetic Scaffolds Facilitate Bone Remodelling by Synchronizing Osteointegration and Phagocytic Activity of Macrophages

Junhui Yin^a, Jianqing Yu^b, Qinfei Ke^b, Qianhao Yang^a, Daoyu Zhu^a, Youshui Gao^{*a}, Yaping Guo^{*b}

and Changqing Zhang*a

^a Department of Orthopaedic Surgery, Shanghai Jiao Tong University Affiliated Sixth People's Hospital, Shanghai 200233, China

*E-mail: gaoyoushui@sjtu.edu.cn (Youshui Gao); zhangcq@sjtu.edu.cn (Changqing Zhang).

^b The Education Ministry Key Lab of Resource Chemistry and Shanghai Key Laboratory of Rare Earth Functional Materials, Shanghai Normal University, Shanghai 200234, China

*E-mail: ypguo@shnu.edu.cn (Yaping Guo).



Fig. S1 (a) SEM image of Ca9La1-HA nanoparticles. (b) La, (c) Ca and (d) P element distribution images of Ca9La1-HA nanoparticles.



Fig. S2 XRD patterns of HA, Ca5La1, Ca7La1 and Ca9La1 nanoparticles.



Fig. S3 (a) XRD patterns and (b) FTIR spectra of CS, Ca9La1 and Ca9La1/CS scaffolds.



Fig. S4 (a) H&E staining and (b) Van Gieson staining of craniums with two cranial defects implanted with HA/CS and Ca9La1/CS scaffolds. The arrows indicated the newly formed bone tissues.



Fig. S5 CCK-8 assay indicated the proliferation of RAW264.7 macrophages co-cultured with the blank control, HA/CS and Ca9La1/CS scaffolds.